



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



NOV 18 2014

David Campbell
San Joaquin Refining Company, Inc.
PO Box 5576
Bakersfield, CA 93388

RE: Final – Authority to Construct/Certificate of Conformity (Minor Mod)
Facility Number: S-36
Project Number: S-1142278

Dear Mr. Campbell:

The Air Pollution Control Officer has issued the Authority to Construct permits to San Joaquin Refining Company, Inc. for administrative corrections/modifications to the diesel treating unit permit S-36-51 to clarify equipment identifications and as-built condition, at the corner of Shell Street and Standard Street in Bakersfield.

Enclosed are the Authority to Construct permits and invoice for the engineering evaluation fees pursuant to District Rule 3010. The District's analysis of the proposal was sent to US EPA Region IX on October 10, 2014. No comments were received following the District's preliminary decision on this project.

Prior to operating with modifications authorized by the Authority to Construct, you must submit an application to modify the Title V permit as an administrative amendment in accordance with District Rule 2520, Section 11.5.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Leonard Scandura at (661) 392-5500.

Sincerely,

Arnaud Marjollet
Director of Permit Services

AM:spl
Enclosures

cc: Gerardo C. Rios, EPA (w/enclosure) via email
Seyed Sadredin

Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585



AUTHORITY TO CONSTRUCT

PERMIT NO: S-36-51-20

ISSUANCE DATE: 11/12/2014

LEGAL OWNER OR OPERATOR: SAN JOAQUIN REFINING COMPANY

MAILING ADDRESS: PO BOX 5576
BAKERSFIELD, CA 93388

LOCATION: STANDARD AND SHELL ST
BAKERSFIELD, CA 93308

SECTION: 23 **TOWNSHIP:** 29S **RANGE:** 27E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 103.4 MMBTU/HR DIESEL TREATING UNIT WITH SULFUR RECOVERY UNIT AND SAFETY FLARE: CORRECT LISTED RATINGS OF CERTAIN HEATERS, DESIGNATION AND/OR SERVICES OF CERTAIN VESSELS AND TANKS, AND OTHER ADMINISTRATIVE CORRECTIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. No modification to heater H-501 shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
4. When heater H-501 is not operated, the fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit
5. Operator shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant heater, at which time this permit will be administratively modified to remove DEU references. [District Rule 4306] Federally Enforceable Through Title V Permit
6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of heater H-501. [District Rule 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

S-36-51-20: Nov 12 2014 2:28PM - LEONARDS : Joint Inspection NOT Required

7. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit
8. The duration of each startup and shutdown period for the 47.1 MMBtu/hr furnace #H-101 shall not exceed 12.0 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
9. The duration of each startup and shutdown period for the 7.4 MMBtu/hr heater #H-201 shall not exceed 8.0 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
10. The duration of each startup and shutdown period for the 17.0 MMBtu/hr heater #H-501 shall not exceed 7.25 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
11. The duration of each startup and shutdown period for the 8.4 MMBtu/hr heater #H-601 shall not exceed 7.5 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
12. The duration of each startup and shutdown period for the 8.0 MMBtu/hr heater H-602 shall not exceed 7.5 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
13. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Equipment includes caustic scrubber S-303, caustic recirculation vessels 1 and 2, and caustic recirculation pumps 970A and 970 B. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Equipment includes: 47.1 MMBtu/hr natural gas-fired and PSA offgas fired reformer furnace #H-101; 30.0 MMBtu/hr (limited to 17.0 MMBtu/hr by fuel limit) refinery fuel gas-fired 1st fractionator heater #H-501; and 7.44 MMBtu/hr refinery fuel gas-fired heater for #H-201 HDS reactor. [District Rule 2010] Federally Enforceable Through Title V Permit
16. Equipment includes: 10.5 MMBtu/hr (limited to 8 MMBtu/hr by fuel limit) refinery fuel gas-fired heater H-602; and 8.4 MMBtu/hr refinery fuel gas-fired 2nd fractionator heater #H-601. [District Rule 2010] Federally Enforceable Through Title V Permit
17. Equipment includes draft fan C-101, reformer H-101, desulfur vessel V-101, shift convertor vessel V-102, process condenser drum V-103, and deaerator V-104. [District Rule 2010] Federally Enforceable Through Title V Permit
18. Equipment includes steam drum V-105, blowdown drum V-106, steam separator V-107, PSA adsorbers V-108 A,B,C & D, and offgas drum V-109. [District Rule 2010] Federally Enforceable Through Title V Permit
19. Equipment includes one 1275 bbl sour water pressure vessel, one 711 bbl, one 1275 bbl, and one 719 bbl light naphtha pressure vessels, and light naphtha loading rack with nitrogen purge system. [District Rule 2010] Federally Enforceable Through Title V Permit
20. Unit 200 (HDS section) includes oil filter A-201, O/H stripper B-201, intermediate stripper F-201, and HDS reactor R-201. [District Rule 2010] Federally Enforceable Through Title V Permit
21. Unit 300 (HDA section) includes hot separator B-301, recycle gas separator B-302, recycle gas compressor K/O drum B-310, hydrogen (H₂) gas compressors K-301 A/B, and HDA reactor R-301. [District Rule 2010] Federally Enforceable Through Title V Permit
22. Unit 400 (amine wash & sour water stripper) includes amine solution filter A-401, OH separator B-401, amine K/O drum B-402, amine solution flash drum B-403, amine adsorber F-401, amine regenerator F-402, and amine storage tank T-401. [District Rule 2010] Federally Enforceable Through Title V Permit
23. Unit 400 includes sour water flash drum B-411, slop oil drum B-412, sour water stripper F-410, and sour water feed drum B-413. [District Rule 2010] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

24. Unit 500 (1st fractionator) includes OH separator B-501, HDA feed surge drum B-502, OH separator for light ends stripper B-503, 1st fractionator F-501, light ends stripper F-502, and 1st fractionator feed heater H-501. [District Rule 2010] Federally Enforceable Through Title V Permit
25. Unit 600 (2nd/3rd fractionators) includes 2nd fractionator accumulator B-601, 3rd fractionator accumulator B-602, 2nd fractionator F-601, 3rd fractionator F-602, and kero stripper F-603. [District Rule 2010] Federally Enforceable Through Title V Permit
26. Unit 600 includes heavy solvent stripper F-604, 2nd fractionator reboiler H-601, heater H-602, compressors K-601 A/B, and vacuum pumps K-602 A/B. [District Rule 2010] Federally Enforceable Through Title V Permit
27. Sulfur recovery unit includes liquefied oxygen storage facility combustion oxygen enriched air blower 10-K-01A, spare combustion oxygen enriched air blower 10-K-01B, amine acid gas and NH₃ gas KO drums 10-V-01/02, and converter 1/2/3-common shell with hydrogenation reactor 10-V-04/05/06. [District Rule 2010] Federally Enforceable Through Title V Permit
28. Sulfur recovery unit includes sulfur pit vent eductor 10-K-02 (venting to thermal oxidizer 10-F-02), reaction furnace 10-F-01, thermal oxidizer and stack 10-F-02, sulfur pit 10-T-01, K/O drum sour water pumps 10-P-01 A/B, sulfur pump 10-P-03, and boiler feedwater pumps 10-P-04 A/B. [District Rule 2010] Federally Enforceable Through Title V Permit
29. Tail gas unit includes reducing gas generator (RGG) 11-F-01, contact condenser pumps 11-P-01 A/B, rich amine pumps 11-P-02 A/B, regenerator reflux pumps 11-P-03 A/B, amine sump pump 11-P-04, and lean amine pump 11-P-05. [District Rule 2010] Federally Enforceable Through Title V Permit
30. Tail gas unit includes amine surge drum 11-T-01, hydrogenation reactor 11-V-01, contact condenser 11-V-02, amine absorber 11-V-03, amine regenerator 11-V-04, and regenerator reflux drum 11-V-05. [District Rule 2010] Federally Enforceable Through Title V Permit
31. The Claus sulfur recovery unit sulfur production shall not exceed six long tons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
32. Fugitive emission rate from caustic scrubber S-303, caustic recirculation vessels 1 and 2, and caustic recirculation pumps P-970-A and P-970-B, calculated using the California Implementation Guideline for Estimating Mass Emissions of Fugitive Hydrocarbon leaks at Petroleum Facilities, Table IV-2a. 1995 EPA Protocol, Refinery Screening Value Range Emissions Factors, shall not exceed 1.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
33. Permittee shall maintain accurate fugitive emissions component counts and calculation of resulting emissions from caustic scrubber S-303, caustic recirculation vessels 1 and 2, and caustic recirculation pumps P-970-A and P-970-B using fugitive emissions factors described in this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
34. Gas leaks exceeding 10,000 ppmv and liquid leaks exceeding 3 drops per minute from the caustic scrubber S-303, caustic recirculation vessels 1 and 2, and caustic recirculation pumps P-970-A and P-970-B are a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
35. Flare shall burn no more than 190,000 scf in any day of hydrogen plant gas, purchased natural gas, and all gases from diesel stripper, diesel hydrogenation flash drum, sour water feed drum B-413, vapors from light naphtha vessels, and gases from heavy oil hydrofinisher processing unit on S-36-109. [Rule 2010] Federally Enforceable Through Title V Permit
36. Upon recommencing operation, permittee shall demonstrate fuel limitation for heater H-501 by either a non-resettable fuel meter for each heater and daily records of fuel use, or provide District approved documentation demonstrating how the fuel flow is limited to the permitted rating. [District Rule 2201] Federally Enforceable Through Title V Permit
37. Permittee shall demonstrate fuel limitation for heater H-602 by either a non-resettable fuel meter for each heater and daily records of fuel use, or provide District approved documentation demonstrating how the fuel flow is limited to the permitted rating. [District Rule 2201] Federally Enforceable Through Title V Permit

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38. All gases from diesel stripper, diesel hydrogenation flash drum, and sour water feed drum B-413 stripper tank shall be sent to MEA section for sulfur compound removal except during plant shutdown or breakdown conditions pursuant to Rule 1100 when it shall be burned in the flare. [District Rule 2201] Federally Enforceable Through Title V Permit
39. Flare equipped with flared gas flow meter serving hydrogen plant gas, purchased natural gas, and all gases from diesel stripper, diesel hydrogenation flash drum, sour water feed drum B-413, and gases from heavy oil hydrofinisher processing unit on S-36-109. These gases shall only be flared during breakdown conditions pursuant to Rule 1100 and during plant shutdowns. [District Rule 4001] Federally Enforceable Through Title V Permit
40. Hydrogen sulfide analyzer/recorder shall be located at exit of tail gas unit prior to thermal oxidizer 10-F-02 and shall be operational and utilized except during bypass of the tail gas treating unit during startup or shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit
41. Bypass of the tail gas unit will occur only when natural gas is supplied to the main reactor furnace during startup or shutdown of the sulfur recovery unit or tail gas treating unit. [District Rule 2201] Federally Enforceable Through Title V Permit
42. Pressure in sour water feed drum B-413 and light naphtha tanks shall be maintained above 15 psig. Sour water feed drum pressure relief valve shall be set at 40 psig and the light naphtha pressure relief valves shall be set at 50 psig and shall vent to atmosphere. [District Rule 4001] Federally Enforceable Through Title V Permit
43. Light naphtha liquid from overhead accumulator shall be sent to light naphtha pressure storage vessels. [District Rule 2201] Federally Enforceable Through Title V Permit
44. Overhead accumulator offgas shall be sent to the fuel gas compressor for introduction into fuel gas system, or shall be flared under plant breakdown conditions pursuant to Rule 1100. [District Rule 2201] Federally Enforceable Through Title V Permit
45. All sour water must be treated in sour water stripper prior to being exposed to the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
46. Sour water pressure tank shall vent to sulfur plant or shall vent to flare during breakdown conditions pursuant to Rule 1100. [District Rule 2201] Federally Enforceable Through Title V Permit
47. If thermal oxidizer 10-F-2 is inoperative, sour water shall not be pumped from sour water storage vessel and diesel hydrotreating unit and heavy oil hydrofinishing processing unit shall be shut down. [District Rule 2201] Federally Enforceable Through Title V Permit
48. Sulfur recovery unit and tail gas unit overall sulfur removal shall be no less than 99.8% by weight except during startup or shutdown conditions. [District Rule 2201] Federally Enforceable Through Title V Permit
49. The inlet gas stream to the thermal oxidizer shall not contain greater than 10 ppmv H₂S on a three hour rolling average basis except during startup or shutdown conditions of the sulfur recovery unit or tail gas treating unit. [District Rule 2201] Federally Enforceable Through Title V Permit
50. Startup and shutdown conditions for the sulfur recovery unit and tail gas treating unit combined shall not occur for more than 12 hours in any day. [District Rule 2201] Federally Enforceable Through Title V Permit
51. Thermal oxidizer sulfur compound emissions during startup or shutdown conditions of the sulfur recovery unit or tail gas treating unit shall not exceed 2000 ppm as SO₂. [District Rule 2201 and 4801] Federally Enforceable Through Title V Permit
52. SO_x emissions from the sulfur recovery unit and tail gas treating unit through the thermal oxidizer shall not exceed 109.6 pounds per day. [District Rule 2201] Federally Enforceable Through Title V Permit
53. Only natural gas consisting primarily of methane and less than 5% by weight hydrocarbons heavier than butane and PSA offgas shall be combusted in reformer furnace #H-101. [District Rule 2201] Federally Enforceable Through Title V Permit
54. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 27.99 lb per day. [District Rule 2201] Federally Enforceable Through Title V Permit

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55. Emissions from process heater H-101 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 0.015 lb/MMBtu. [District Rule 2201, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
56. Emissions from process heater H-201 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.0353 lb/MMBtu or 29.4 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O2. [District Rule 2201] Federally Enforceable Through Title V Permit
57. Upon recommencing operation, emissions from process heater H-501 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O2. [District Rule 2201, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
58. Emissions from process heaters H-602 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O2. [District Rule 2201, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
59. Emissions from process heater H-601 shall not exceed any of the following: PM10: 0.0137 lb/MMBtu; NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2; VOC: 0.0040 lb/MMBtu; or CO: 400 ppmv @ 3% O2. [District Rule 2201, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
60. Emissions from flare shall not exceed any of the following: PM10: 2.7 lb/day, SOx: 104.9 lb/day, NOx: 6.8 lb/day, VOC: 7.4 lb/day, or CO: 70.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
61. Sulfur content of PSA offgas combusted in reformer furnace H-101 shall not exceed 0.0123 grains/dscf. Sampling of PSA offgas to determine compliance with sulfur content limit shall be conducted annually. [District Rule 2201] Federally Enforceable Through Title V Permit
62. Upon recommencing operation, sulfur content of fuel gas combusted by 1st fractionator feed heater H-501 shall not exceed 0.10 grains/dscf as determined on a rolling three (3) hour average basis. [40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit
63. Sulfur content of fuel gas combusted by heater H-602 and heater H-201 shall not exceed 0.0553 grains/dscf as determined on a rolling three (3) hour average basis. [District Rule 2201 and 40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit
64. Sulfur content of fuel gas combusted by 3rd fractionator feed heater H-601 shall not exceed 0.069 grains/dscf as determined on a rolling three (3) hour average basis. [District Rule 2201 and 40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit
65. Permittee shall maintain accurate records of number of fugitive emissions components and calculated emissions using Technical Guidance Document to AB2588 for refineries Tables D1-D3, AP-42 Table 9.1-2, or other District approved emission factors. [District Rule 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit
66. Upon recommencing operation, heater H-501 shall be equipped with sampling facilities for source testing in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit
67. All fired equipment, H-101, H-201, H-601, and H-602, shall be equipped with sampling facilities for source testing in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit
68. Source testing of heaters H-101, H-201, H-501, H-601 and H-602 to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
69. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
70. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

71. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
72. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
73. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
74. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
75. Permittee shall comply with all applicable notification, reporting, recordkeeping, testing, and maintenance requirements of Rule 4001 (40 CFR 60; subparts J, GGG, and QQQ). Heaters H-201, H-501, H-601, H-602, and the flare are subject to Subpart J. [District Rule 4001] Federally Enforceable Through Title V Permit
76. Equipment shall include monitoring system as required by 40 CFR 60, Subpart J for monitoring and recording of sulfur content (dry basis) of fuel gas (except PUC regulated natural gas, psa offgas, and combinations of only PUC gas and psa offgas) prior to combustion. [District Rule 4001] Federally Enforceable Through Title V Permit
77. The combustion in the thermal oxidizer, or other fuel gas combustion device of gases released as a result of start-up, shutdown, or malfunction is exempt from the 0.1 gr/dscf H₂S requirement. The combustion in the flare of gases released as a result of start-up, shutdown, upset, malfunction, or the result of relief valve leakage is exempt from the 0.1 gr/dscf H₂S requirement. [District Rule 4001, Subpart J] Federally Enforceable Through Title V Permit
78. Continuous emissions monitoring system shall be installed, calibrated, operated, and reported according to EPA guidelines as specified under 40 CFR 60, Subpart J, Specification 7, and general requirements. CEM results shall be calculated on a rolling three (3) hour basis. [District Rule 4001] Federally Enforceable Through Title V Permit
79. PSA gas monitoring shall be maintained pursuant to EPA approved alternate monitoring, one analysis for the sulfur content of the feedstock gas each reporting period and a statement confirming that the pipeline natural gas is the only feed to the hydrogen plant. [District Rule 4001] Federally Enforceable Through Title V Permit
80. Permittee shall maintain accurate daily records of amount of gas burned in the flare. [District Rule 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit
81. Permittee shall sample flared gas for H₂S content twice daily. [District Rule 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit
82. Permittee shall maintain accurate records of fuel consumption data, operational data, startup and shutdown condition frequency and duration of the sulfur recovery unit, and gas sulfur content to verify daily emission limit compliance. [District Rule 2201 and 1070] Federally Enforceable Through Title V Permit
83. All records required by this permit shall be made available for District inspection upon request for a period of five years. [District Rule 1070, and 2520, 9.4.2] Federally Enforceable Through Title V Permit
84. Operator shall not burn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H₂S) in excess of 0.10 gr/dscf (230 mg/dscm). [40 CFR Part 60, subpart J, 60.104(a)(1)] Federally Enforceable Through Title V Permit
85. Operator shall report all rolling 3-hour periods during which the average concentration of H₂S as measured by the H₂S continuous monitoring system exceeds 0.10 gr/dscf (230 mg/dscm). [40 CFR Part 60, subpart J, 60.105(e)(3)(ii)] Federally Enforceable Through Title V Permit
86. Operator shall determine compliance with the H₂S standard using EPA Method 11. [40 CFR Part 60, subpart J, 60.106(e)] Federally Enforceable Through Title V Permit
87. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

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88. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results used to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel. [District Rule 2520, 9.4.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
89. Operator shall maintain all records for at least five years and conform to the recordkeeping requirements described in District Rule 2520. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
90. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
91. Emissions of sulfur compounds from any of the following units, H-101, H-201, H-501, H-601, H-602 shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
92. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
93. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
94. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
95. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 6.2.1; 4306, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit
96. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period (Kern County Rule 407). To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.3.2 and 4801] Federally Enforceable Through Title V Permit
97. Nitrogen oxide (NO_x) emission concentrations in ppmv shall be referenced at dry stack gas conditions, and shall be calculated to 3.00 percent by volume stack gas oxygen and averaged over 60 minutes, and lb/MMBtu rates shall be calculated as lb NO₂/MMBtu of heat input (hhv). [District Rules 4305, 5.0, 8.2; 4306, 8.1; and/or 4351, 8.1] Federally Enforceable Through Title V Permit
98. Emissions from H-101, H-201, H-501, H-601, and H-602 shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 forty-minute test runs for NO_x and CO. [District Rule 1081] Federally Enforceable Through Title V Permit
99. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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100. Flares shall only be used with the net heating value of the gas being combusted being 200 Btu/scf or greater if the flare is non-assisted; or with the net heating value of the gas being combusted being 300 Btu/scf or greater if the flare is air-assisted or steam-assisted. [40 CFR 60.18 (c)(3)] Federally Enforceable Through Title V Permit
101. The net heating value of the gas being combusted in a flare shall be calculated annually, pursuant to 40 CFR 60.18(f)(3) and using EPA Method 18, ASTM D1946, and ASTM D2382. [40 CFR 60.18 (f)(3-6)] Federally Enforceable Through Title V Permit
102. Air-assisted flares shall be operated with an exit velocity less than V_{max} , as determined by the equation specified in paragraph 40 CFR 60.18 (f)(6). [40 CFR 60.18 (c)(5)] Federally Enforceable Through Title V Permit
103. Nonassisted and steam-assisted flares shall be operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18 (f)(4), less than 60 ft/sec, except as provided in 40 CFR 60.18 (c)(4)(ii) and (iii). [40 CFR 60.18 (c)(4)(i)] Federally Enforceable Through Title V Permit
104. Nonassisted and steam-assisted flares may be operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18 (f)(4), equal to or greater than 60 ft/sec, but less than 400 ft/sec if the net heating value of the gas being combusted is greater than 1,000 Btu/scf. [40 CFR 60.18 (c)(4)(ii)] Federally Enforceable Through Title V Permit
105. Nonassisted and steam-assisted flares may be operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18 (f)(4), less than the velocity, V_{max} , as determined by the equation specified in paragraph 40 CFR 60.18 (f)(5), and less than 400 ft/sec. [40 CFR 60.18 (c)(4)(iii)] Federally Enforceable Through Title V Permit
106. The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip. [40 CFR 60.18 (f)(4)] Federally Enforceable Through Title V Permit
107. Flares shall be operated with a flame present at all times, and kept in operation when emissions may be vented to them. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. [40 CFR 60.18 (c)(2), 60.18 (e), and 60.18 (f)(2)] Federally Enforceable Through Title V Permit
108. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
109. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of District Rule 4801, section 3.1 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
110. Heat exchangers 11-E-01A and 11-E-01B shall not operate concurrently. [District Rule 2010] Federally Enforceable Through Title V Permit
111. Permittee shall keep an accurate record of dates of inspection and monitoring, components inspected and monitored, and results of fugitive emissions calculations for compliance with the daily emission limit of the caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps P-970-A and P-970-B. Such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and District Rule 2201] Federally Enforceable Through Title V Permit
112. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
113. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
114. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an alternative equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
115. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit

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116. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere. [District Rule 5.8] Federally Enforceable Through Title V Permit
117. The operator shall minimize sulfur dioxide flare emissions to less than 1.50 tons per million barrels of crude processing capacity, calculated as an average over one calendar year. [District Rule 4311, 5.9.1] Federally Enforceable Through Title V Permit
118. The operator shall monitor the vent gas flow to the flare with a flow measuring device. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit
119. The operator shall maintain and retain on-site for a minimum of five years, and made available to the APCO, ARB, and EPA a copy of the approved flare minimization plan, a copy of annual reports submitted to the District, and all applicable flare monitoring data collected as required by this permit. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit
120. The operator of a flare subject to flare minimization shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2] Federally Enforceable Through Title V Permit
121. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: the results of an investigation to determine the primary cause and contributing factors of the flaring event; any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; if appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and the date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit
122. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: the total volumetric flow of vent gas in standard cubic feet for each day; hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition; if vent gas composition is monitored by a continuous analyzer or analyzers, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month; if the flow monitor used measures molecular weight, the average molecular weight for each hour of each month; for any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month; and the means used to determine flow; flare monitoring system downtime periods, including dates and times; for each day and for each month provide calculated sulfur dioxide emissions; and a flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
123. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. [District Rule 4311, 6.3.4.1] Federally Enforceable Through Title V Permit
124. Vent gas flow shall be determined using a verification method recommended by the manufacturer of the flow monitoring equipment installed. [District Rule 4311, 6.3.5.2] Federally Enforceable Through Title V Permit
125. The operator shall monitor sulfur content of the vent gas to the flare using a colorimetric tube system on a daily basis, and monitor vent gas hydrocarbon on a weekly basis by collecting samples and having them tested. [District Rule 4311, 6.6.5] Federally Enforceable Through Title V Permit
126. The operator shall provide the APCO with access to the flare monitoring system to collect the vent gas samples. [District Rule 4311, 6.6.7] Federally Enforceable Through Title V Permit

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127. The operator shall monitor the volumetric flows of the flare's purge and pilot gases with flow measuring devices or other parameters as specified on the Permit to Operate so that volumetric flows of pilot and purge gas may be calculated based on pilot design and the parameters monitored. [District Rule 4311, 6.7] Federally Enforceable Through Title V Permit
128. The operator shall monitor and record the water level and pressure of the water seal that services the flare daily. [District Rule 4311, 6.8] Federally Enforceable Through Title V Permit
129. The operator shall report periods of flare monitoring system inoperation greater than 24 continuous hours by the following working day, followed by notification of resumption of monitoring. Periods of inoperation of monitoring equipment shall not exceed 14 days per any 18-consecutive-month period. Periods of flare monitoring system inoperation do not include the periods when the system feeding the flare is not operating. [District Rule 4311, 6.9.1] Federally Enforceable Through Title V Permit
130. The operator shall install and maintain equipment that records a real-time digital image of the flare and flame at a frame rate of no less than one frame per minute. The recorded image of the flare shall be of sufficient size, contrast, and resolution to be readily apparent in the overall image or frame. The image shall include an embedded date and time stamp. The equipment shall archive the images for each 24-hour period. In lieu of video monitoring the operator may use an alternative monitoring method that provides data to verify date, time, vent gas flow, and duration of flaring events. [District Rule 4311, 6.10] Federally Enforceable Through Title V Permit



AUTHORITY TO CONSTRUCT

PERMIT NO: S-36-51-21

ISSUANCE DATE: 11/12/2014

LEGAL OWNER OR OPERATOR: SAN JOAQUIN REFINING COMPANY

MAILING ADDRESS: PO BOX 5576
BAKERSFIELD, CA 93388

LOCATION: STANDARD AND SHELL ST
BAKERSFIELD, CA 93308

SECTION: 23 **TOWNSHIP:** 29S **RANGE:** 27E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 103.4 MMBTU/HR DIESEL TREATING UNIT WITH SULFUR RECOVERY UNIT, CAUSTIC SCRUBBER, AND SAFETY FLARE: INSTALL SCR ON H-101 FOR RULE 4320 COMPLIANCE AND REMOVE OIL-FIRING PROVISIONS; ALSO CORRECT LISTED RATINGS OF CERTAIN HEATERS, DESIGNATION AND/OR SERVICES OF CERTAIN VESSELS AND TANKS, AND OTHER ADMINISTRATIVE CORRECTIONS

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This Authority to Construct (ATC) to be implemented concurrently with S-36-51-19. [District Rule 2201] Federally Enforceable Through Title V Permit
4. No modification to heater H-501 shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
5. When heater H-501 is not operated, the fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO



Arnaud Marjollet, Director of Permit Services

S-36-51-21: Nov 12 2014 2:28PM - LEONARDS : Joint Inspection NOT Required

6. Operator shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant heater, at which time this permit will be administratively modified to remove DEU references. [District Rule 4306] Federally Enforceable Through Title V Permit
7. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of heater H-501. [District Rule 4306] Federally Enforceable Through Title V Permit
8. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit
9. The duration of each startup and shutdown period for the 47.1 MMBtu/hr furnace #H-101 shall not exceed 12.0 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
10. The duration of each startup and shutdown period for the 7.4 MMBtu/hr heater #H-201 shall not exceed 8.0 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
11. The duration of each startup and shutdown period for the 17.0 MMBtu/hr heater #H-501 shall not exceed 7.25 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
12. The duration of each startup and shutdown period for the 8.4 MMBtu/hr heater #H-601 shall not exceed 7.5 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
13. The duration of each startup and shutdown period for the 8.0 MMBtu/hr heater H-602 shall not exceed 7.5 hours and 2.0 hours respectively. Emission limits of Rule 4305 and 4306 are waived during periods of startup and shutdown. [District Rule 4305, Section 5.5.6 and 4306, 5.3.3] Federally Enforceable Through Title V Permit
14. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Equipment includes caustic scrubber S-303, caustic recirculation vessels 1 and 2, and caustic recirculation pumps 970A and 970 B. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Equipment includes: 47.1 MMBtu/hr natural gas-fired and PSA offgas fired reformer furnace #H-101; 30.0 MMBtu/hr (limited to 17.0 MMBtu/hr by fuel limit) refinery fuel gas-fired 1st fractionator heater #H-501; and 7.44 MMBtu/hr refinery fuel gas-fired heater for #H-201 HDS reactor. [District Rule 2010] Federally Enforceable Through Title V Permit
17. Heater H-101 shall be equipped with a SCR system. The heater shall not be operated unless the SCR system is operating. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The exhaust stack from heater H-101 shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
19. Ammonia slip from the SCR unit shall not exceed 10 ppmv @ 3% O₂. [District Rule 4102]
20. Monthly records of the total amount of ammonia used by the SCR system shall be maintained. [District Rules 1070 and 2520, 9.4.1] Federally Enforceable Through Title V Permit
21. Equipment includes: 10.5 MMBtu/hr (limited to 8 MMBtu/hr by fuel limit) refinery fuel gas-fired heater H-602; and 8.4 MMBtu/hr refinery fuel gas-fired 2nd fractionator heater #H-601. [District Rule 2010] Federally Enforceable Through Title V Permit
22. Equipment includes draft fan C-101, reformer H-101, desulfur vessel V-101, shift convertor vessel V-102, process condenser drum V-103, and deaerator V-104. [District Rule 2010] Federally Enforceable Through Title V Permit
23. Equipment includes steam drum V-105, blowdown drum V-106, steam separator V-107, PSA adsorbers V-108 A,B,C & D, and offgas drum V-109. [District Rule 2010] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

24. Equipment includes one 1,275 bbl sour water pressure vessel, one 711 bbl, one 1,275 bbl, and one 719 bbl light naphtha pressure vessels, and light naphtha loading rack with nitrogen purge system. [District Rule 2010] Federally Enforceable Through Title V Permit
25. Unit 200 (HDS section) includes oil filter A-201, O/H stripper B-201, intermediate stripper F-201, and HDS reactor R-201. [District Rule 2010] Federally Enforceable Through Title V Permit
26. Unit 300 (HDA section) includes hot separator B-301, recycle gas separator B-302, recycle gas compressor K/O drum B-310, hydrogen (H₂) gas compressors K-301 A/B, and HDA reactor R-301. [District Rule 2010] Federally Enforceable Through Title V Permit
27. Unit 400 (amine wash & sour water stripper) includes amine solution filter A-401, OH separator B-401, amine K/O drum B-402, amine solution flash drum B-403, amine adsorber F-401, amine regenerator F-402, and amine storage tank T-401. [District Rule 2010] Federally Enforceable Through Title V Permit
28. Unit 400 includes sour water flash drum B-411, slop oil drum B-412, sour water stripper F-410, and sour water feed drum B-413. [District Rule 2010] Federally Enforceable Through Title V Permit
29. Unit 500 (1st fractionator) includes OH separator B-501, HDA feed surge drum B-502, OH separator for light ends stripper B-503, 1st fractionator F-501, light ends stripper F-502, and 1st fractionator feed heater H-501. [District Rule 2010] Federally Enforceable Through Title V Permit
30. Unit 600 (2nd/3rd fractionators) includes 2nd fractionator accumulator B-601, 3rd fractionator accumulator B-602, 2nd fractionator F-601, 3rd fractionator F-602, and kero stripper F-603. [District Rule 2010] Federally Enforceable Through Title V Permit
31. Unit 600 includes heavy solvent stripper F-604, 2nd fractionator reboiler H-601, heater H-602, compressors K-601 A/B, and vacuum pumps K-602 A/B. [District Rule 2010] Federally Enforceable Through Title V Permit
32. Sulfur recovery unit includes liquefied oxygen storage facility combustion oxygen enriched air blower 10-K-01A, spare combustion oxygen enriched air blower 10-K-01B, amine acid gas and NH₃ gas KO drums 10-V-01/02, and converter 1/2/3-common shell with hydrogenation reactor 10-V-04/05/06. [District Rule 2010] Federally Enforceable Through Title V Permit
33. Sulfur recovery unit includes sulfur pit vent eductor 10-K-02 (venting to thermal oxidizer 10-F-02), reaction furnace 10-F-01, thermal oxidizer and stack 10-F-02, sulfur pit 10-T-01, K/O drum sour water pumps 10-P-01 A/B, sulfur pump 10-P-03, and boiler feedwater pumps 10-P-04 A/B. [District Rule 2010] Federally Enforceable Through Title V Permit
34. Tail gas unit includes reducing gas generator (RGG) 11-F-01, contact condenser pumps 11-P-01 A/B, rich amine pumps 11-P-02 A/B, regenerator reflux pumps 11-P-03 A/B, amine sump pump 11-P-04, and lean amine pump 11-P-05. [District Rule 2010] Federally Enforceable Through Title V Permit
35. Tail gas unit includes amine surge drum 11-T-01, hydrogenation reactor 11-V-01, contact condenser 11-V-02, amine absorber 11-V-03, amine regenerator 11-V-04, and regenerator reflux drum 11-V-05. [District Rule 2010] Federally Enforceable Through Title V Permit
36. The Claus sulfur recovery unit sulfur production shall not exceed six long tons per day. [District Rule 2201] Federally Enforceable Through Title V Permit
37. Fugitive emission rate from caustic scrubber S-303, caustic recirculation vessels 1 and 2, and caustic recirculation pumps P-970-A and P-970-B, calculated using the California Implementation Guideline for Estimating Mass Emissions of Fugitive Hydrocarbon leaks at Petroleum Facilities, Table IV-2a. 1995 EPA Protocol, Refinery Screening Value Range Emissions Factors, shall not exceed 1.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
38. Permittee shall maintain accurate fugitive emissions component counts and calculation of resulting emissions from caustic scrubber S-303, caustic recirculation vessels 1 and 2, and caustic recirculation pumps P-970-A and P-970-B using fugitive emissions factors described in this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

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39. Gas leaks exceeding 10,000 ppmv and liquid leaks exceeding 3 drops per minute from the caustic scrubber S-303, caustic recirculation vessels 1 and 2, and caustic recirculation pumps P-970-A and P-970-B are a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
40. Flare shall burn no more than 190,000 scf in any day of hydrogen plant gas, purchased natural gas, and all gases from diesel stripper, diesel hydrogenation flash drum, sour water feed drum B-413, vapors from light naphtha vessels, and gases from heavy oil hydrofinisher processing unit on S-36-109. [District Rule 2010] Federally Enforceable Through Title V Permit
41. Upon recommencing operation, permittee shall demonstrate fuel limitation for heater H-501 by either a non-resettable fuel meter for each heater and daily records of fuel use, or provide District approved documentation demonstrating how the fuel flow is limited to the permitted rating. [District Rule 2201] Federally Enforceable Through Title V Permit
42. Permittee shall demonstrate fuel limitation for heater H-602 by either a non-resettable fuel meter for each heater and daily records of fuel use, or provide District approved documentation demonstrating how the fuel flow is limited to the permitted rating. [District Rule 2201] Federally Enforceable Through Title V Permit
43. All gases from diesel stripper, diesel hydrogenation flash drum, and sour water feed drum B-413 shall be sent to MEA section for sulfur compound removal except during plant shutdown or breakdown conditions pursuant to Rule 1100 when it shall be burned in the flare. [District Rule 2201] Federally Enforceable Through Title V Permit
44. Flare equipped with flared gas flow meter serving hydrogen plant gas, purchased natural gas, and all gases from diesel stripper, diesel hydrogenation flash drum, sour water feed drum B-413, and gases from heavy oil hydrofinisher processing unit on S-36-109. These gases shall only be flared during breakdown conditions pursuant to Rule 1100 and during plant shutdowns. [District Rule 4001] Federally Enforceable Through Title V Permit
45. Hydrogen sulfide analyzer/recorder shall be located at exit of tail gas unit prior to thermal oxidizer 10-F-02 and shall be operational and utilized except during bypass of the tail gas treating unit during startup or shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit
46. Bypass of the tail gas unit will occur only when natural gas is supplied to the main reactor furnace during startup or shutdown of the sulfur recovery unit or tail gas treating unit. [District Rule 2201] Federally Enforceable Through Title V Permit
47. Pressure in sour water feed drum B-413 and light naphtha tanks shall be maintained above 15 psig. Sour water tank pressure relief valve shall be set at 40 psig and the light naphtha pressure relief valves shall be set at 50 psig and shall vent to atmosphere. [District Rule 4001] Federally Enforceable Through Title V Permit
48. Light naphtha liquid from overhead accumulator shall be sent to light naphtha pressure storage vessels. [District Rule 2201] Federally Enforceable Through Title V Permit
49. Overhead accumulator offgas shall be sent to the fuel gas compressor for introduction into fuel gas system, or shall be flared under plant breakdown conditions pursuant to Rule 1100. [District Rule 2201] Federally Enforceable Through Title V Permit
50. All sour water must be treated in sour water stripper prior to being exposed to the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
51. Sour water pressure tank shall vent to sulfur plant or shall vent to flare during breakdown conditions pursuant to Rule 1100. [District Rule 2201] Federally Enforceable Through Title V Permit
52. If thermal oxidizer 10-F-2 is inoperative, sour water shall not be pumped from sour water storage vessel and diesel hydrotreating unit and heavy oil hydrofinishing processing unit shall be shut down. [District Rule 2201] Federally Enforceable Through Title V Permit
53. Sulfur recovery unit and tail gas unit overall sulfur removal shall be no less than 99.8% by weight except during startup or shutdown conditions. [District Rule 2201] Federally Enforceable Through Title V Permit
54. The inlet gas stream to the thermal oxidizer shall not contain greater than 10 ppmv H₂S on a three hour rolling average basis except during startup or shutdown conditions of the sulfur recovery unit or tail gas treating unit. [District Rule 2201] Federally Enforceable Through Title V Permit

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55. Startup and shutdown conditions for the sulfur recovery unit and tail gas treating unit combined shall not occur for more than 12 hours in any day. [District Rule 2201] Federally Enforceable Through Title V Permit
56. Thermal oxidizer sulfur compound emissions during startup or shutdown conditions of the sulfur recovery unit or tail gas treating unit shall not exceed 2000 ppm as SO₂. [District Rule 2201 and 4801] Federally Enforceable Through Title V Permit
57. SO_x emissions from the sulfur recovery unit and tail gas treating unit through the thermal oxidizer shall not exceed 109.6 pounds per day. [District Rule 2201] Federally Enforceable Through Title V Permit
58. Only natural gas consisting primarily of methane and less than 5% by weight hydrocarbons heavier than butane and PSA offgas shall be combusted in reformer furnace #H-101. [District Rule 2201] Federally Enforceable Through Title V Permit
59. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 27.99 lb per day. [District Rule 2201] Federally Enforceable Through Title V Permit
60. Emissions from process heater H-101 shall not exceed any of the following limits: 0.011 lb-NO_x/MMBtu (9 ppmv @ 3% O₂), 0.0034 lb-SO_x/MMBtu, 0.0137 lb-PM₁₀/MMBtu, 0.015 lb-CO/MMBtu (20 ppmv @ 3% O₂), or 0.0040 lb-VOC/MMBtu (9.5 ppmv @ 3% O₂). [District Rules 2201, 4305, 4306, 4320 and 4351] Federally Enforceable Through Title V Permit
61. Emissions from process heater H-201 shall not exceed any of the following: PM₁₀: 0.0137 lb/MMBtu; NO_x (as NO₂): 0.0353 lb/MMBtu or 29.4 ppmv @ 3% O₂; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O₂. [District Rule 2201] Federally Enforceable Through Title V Permit
62. Upon recommencing operation, emissions from process heater H-501 shall not exceed any of the following: PM₁₀: 0.0137 lb/MMBtu; NO_x (as NO₂): 0.036 lb/MMBtu or 30 ppmv @ 3% O₂; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O₂. [District Rules 2201, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
63. Emissions from process heaters H-602 shall not exceed any of the following: PM₁₀: 0.0137 lb/MMBtu; NO_x (as NO₂): 0.036 lb/MMBtu or 30 ppmv @ 3% O₂; VOC: 0.0040 lb/MMBtu; or CO: 137 ppmv @ 3% O₂. [District Rules 2201, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
64. Emissions from process heater H-601 shall not exceed any of the following: PM₁₀: 0.0137 lb/MMBtu; NO_x (as NO₂): 0.036 lb/MMBtu or 30 ppmv @ 3% O₂; VOC: 0.0040 lb/MMBtu; or CO: 400 ppmv @ 3% O₂. [District Rules 2201, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
65. Emissions from flare shall not exceed any of the following: PM₁₀: 2.7 lb/day, SO_x: 104.9 lb/day, NO_x: 6.8 lb/day, VOC: 7.4 lb/day, or CO: 70.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
66. Sulfur content of PSA offgas combusted in reformer furnace H-101 shall not exceed 0.0123 grains/dscf. Sampling of PSA offgas to determine compliance with sulfur content limit shall be conducted annually. [District Rule 2201] Federally Enforceable Through Title V Permit
67. Sulfur content of fuel gas combusted by 1st fractionator feed heater H-501 shall not exceed 0.10 grains/dscf as determined on a rolling three (3) hour average basis. [40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit
68. Sulfur content of fuel gas combusted by heater H-602 and heater H-201 shall not exceed 0.0553 grains/dscf as determined on a rolling three (3) hour average basis. [District Rule 2201 and 40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit
69. Sulfur content of fuel gas combusted by 3rd fractionator feed heater H-601 shall not exceed 0.069 grains/dscf as determined on a rolling three (3) hour average basis. [District Rule 2201 and 40 CFR 60.104(a)(1)] Federally Enforceable Through Title V Permit
70. Permittee shall maintain accurate records of number of fugitive emissions components and calculated emissions using Technical Guidance Document to AB2588 for refineries Tables D1-D3, AP-42 Table 9.1-2, or other District approved emission factors. [District Rules 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

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71. Upon recommencing operation, heater H-501 shall be equipped with sampling facilities for source testing in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit
72. All fired equipment, H-101, H-201, H-601, and H-602, shall be equipped with sampling facilities for source testing in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit
73. Source testing to measure NOx and CO emissions from the 47.1 MMBtu/hr Heater #H-101 shall be conducted within 60 days of initial startup. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
74. Source testing to measure NOx and CO emissions from heaters H-101, H-201, H-501, H-601 and H-602 shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
75. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
76. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
77. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
78. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
79. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
80. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
81. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
82. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
83. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
84. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 of the heaters at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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85. The permittee shall monitor and record the stack concentration of NH₃ from the SCR unit at least once during each month. This monitoring shall be conducted utilizing Draeger tubes or a District-approved equivalent method at the time NO_x, CO and O₂ readings are taken. Monitoring shall not be required if the unit is not in operation, i.e., the unit need not be started solely to perform monitoring. Monitoring shall be performed within one (1) day of restarting the unit unless monitoring has been performed within the last month. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
86. In stack oxygen monitors are acceptable for O₂ measurement. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
87. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
88. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
89. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
90. Permittee shall comply with all applicable notification, reporting, recordkeeping, testing, and maintenance requirements of Rule 4001 (40 CFR 60; subparts J, GGG, and QQQ). Heaters H-201, H-501, H-601, H-602, and the flare are subject to Subpart J. [District Rule 4001] Federally Enforceable Through Title V Permit
91. Equipment shall include monitoring system as required by 40 CFR 60, Subpart J for monitoring and recording of sulfur content (dry basis) of fuel gas (except PUC regulated natural gas, psa offgas, and combinations of only PUC gas and psa offgas) prior to combustion. [District Rule 4001] Federally Enforceable Through Title V Permit
92. The combustion in the thermal oxidizer, or other fuel gas combustion device of gases released as a result of start-up, shutdown, or malfunction is exempt from the 0.1 gr/dscf H₂S requirement. The combustion in the flare of gases released as a result of start-up, shutdown, upset, malfunction, or the result of relief valve leakage is exempt from the 0.1 gr/dscf H₂S requirement. [District Rule 4001, Subpart J] Federally Enforceable Through Title V Permit
93. Continuous emissions monitoring system shall be installed, calibrated, operated, and reported according to EPA guidelines as specified under 40 CFR 60, Subpart J, Specification 7, and general requirements. CEM results shall be calculated on a rolling three (3) hour basis. [District Rule 4001] Federally Enforceable Through Title V Permit
94. PSA gas monitoring shall be maintained pursuant to EPA approved alternate monitoring, one analysis for the sulfur content of the feedstock gas each reporting period and a statement confirming that the pipeline natural gas is the only feed to the hydrogen plant. [District Rule 4001] Federally Enforceable Through Title V Permit
95. Permittee shall maintain accurate daily records of amount of gas burned in the flare. [District Rule 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit
96. Permittee shall sample flared gas for H₂S content twice daily. [District Rule 1070, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

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97. Permittee shall maintain accurate records of fuel consumption data, operational data, startup and shutdown condition frequency and duration of the sulfur recovery unit, and gas sulfur content to verify daily emission limit compliance. [District Rule 2201 and 1070] Federally Enforceable Through Title V Permit
98. All records required by this permit shall be made available for District inspection upon request for a period of five years. [District Rule 1070, and 2520, 9.4.2] Federally Enforceable Through Title V Permit
99. Operator shall not burn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H₂S) in excess of 0.10 gr/dscf (230 mg/dscm). [40 CFR Part 60, subpart J, 60.104(a)(1)] Federally Enforceable Through Title V Permit
100. Operator shall report all rolling 3-hour periods during which the average concentration of H₂S as measured by the H₂S continuous monitoring system exceeds 0.10 gr/dscf (230 mg/dscm). [40 CFR Part 60, subpart J, 60.105(e)(3)(ii)] Federally Enforceable Through Title V Permit
101. Operator shall determine compliance with the H₂S standard using EPA Method 11. [40 CFR Part 60, subpart J, 60.106(e)] Federally Enforceable Through Title V Permit
102. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
103. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results used to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel. [District Rule 2520, 9.4.2 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
104. Operator shall maintain all records for at least five years and conform to the recordkeeping requirements described in District Rule 2520. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
105. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
106. Emissions of sulfur compounds from any of the following units, H-101, H-201, H-501, H-601, H-602 shall not exceed 200 lb per hour, calculated as SO₂. [District Rule 4301] Federally Enforceable Through Title V Permit
107. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520] Federally Enforceable Through Title V Permit
108. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
109. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
110. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 6.2.1; 4306, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit
111. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. [District Rule 4801] Federally Enforceable Through Title V Permit
112. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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113. Flares shall only be used with the net heating value of the gas being combusted being 200 Btu/scf or greater if the flare is non-assisted; or with the net heating value of the gas being combusted being 300 Btu/scf or greater if the flare is air-assisted or steam-assisted. [40 CFR 60.18 (c)(3)] Federally Enforceable Through Title V Permit
114. The net heating value of the gas being combusted in a flare shall be calculated annually, pursuant to 40 CFR 60.18(f)(3) and using EPA Method 18, ASTM D1946, and ASTM D2382. [40 CFR 60.18 (f)(3-6)] Federally Enforceable Through Title V Permit
115. Air-assisted flares shall be operated with an exit velocity less than V_{max} , as determined by the equation specified in paragraph 40 CFR 60.18 (f)(6). [40 CFR 60.18 (c)(5)] Federally Enforceable Through Title V Permit
116. Nonassisted and steam-assisted flares shall be operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18 (f)(4), less than 60 ft/sec, except as provided in 40 CFR 60.18 (c)(4)(ii) and (iii). [40 CFR 60.18 (c)(4)(i)] Federally Enforceable Through Title V Permit
117. Nonassisted and steam-assisted flares may be operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18 (f)(4), equal to or greater than 60 ft/sec, but less than 400 ft/sec if the net heating value of the gas being combusted is greater than 1,000 Btu/scf. [40 CFR 60.18 (c)(4)(ii)] Federally Enforceable Through Title V Permit
118. Nonassisted and steam-assisted flares may be operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18 (f)(4), less than the velocity, V_{max} , as determined by the equation specified in paragraph 40 CFR 60.18 (f)(5), and less than 400 ft/sec. [40 CFR 60.18 (c)(4)(iii)] Federally Enforceable Through Title V Permit
119. The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip. [40 CFR 60.18 (f)(4)] Federally Enforceable Through Title V Permit
120. Flares shall be operated with a flame present at all times, and kept in operation when emissions may be vented to them. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. [40 CFR 60.18 (c)(2), 60.18 (e), and 60.18 (f)(2)] Federally Enforceable Through Title V Permit
121. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
122. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of District Rule 4801, section 3.1 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
123. Heat exchangers 11-E-01A and 11-E-01B shall not operate concurrently. [District Rule 2010] Federally Enforceable Through Title V Permit
124. Permittee shall keep an accurate record of dates of inspection and monitoring, components inspected and monitored, and results of fugitive emissions calculations for compliance with the daily emission limit of the caustic scrubber S-303, caustic recirculation vessels A and B, and caustic recirculation pumps P-970-A and P-970-B. Such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
125. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
126. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
127. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an alternative equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
128. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit

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129. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere. [District Rule 5.8] Federally Enforceable Through Title V Permit
130. The operator shall minimize sulfur dioxide flare emissions to less than 1.50 tons per million barrels of crude processing capacity, calculated as an average over one calendar year. [District Rule 4311, 5.9.1] Federally Enforceable Through Title V Permit
131. The operator shall monitor the vent gas flow to the flare with a flow measuring device. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit
132. The operator shall maintain and retain on-site for a minimum of five years, and made available to the APCO, ARB, and EPA a copy of the approved flare minimization plan, a copy of annual reports submitted to the District, and all applicable flare monitoring data collected as required by this permit. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit
133. The operator of a flare subject to flare minimization shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2] Federally Enforceable Through Title V Permit
134. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: the results of an investigation to determine the primary cause and contributing factors of the flaring event; any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; if appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and the date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit
135. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: the total volumetric flow of vent gas in standard cubic feet for each day; hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition; if vent gas composition is monitored by a continuous analyzer or analyzers, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month; if the flow monitor used measures molecular weight, the average molecular weight for each hour of each month; for any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month; and the means used to determine flow; flare monitoring system downtime periods, including dates and times; for each day and for each month provide calculated sulfur dioxide emissions; and a flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
136. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. [District Rule 4311, 6.3.4.1] Federally Enforceable Through Title V Permit
137. Vent gas flow shall be determined using a verification method recommended by the manufacturer of the flow monitoring equipment installed. [District Rule 4311, 6.3.5.2] Federally Enforceable Through Title V Permit
138. The operator shall monitor sulfur content of the vent gas to the flare using a colorimetric tube system on a daily basis, and monitor vent gas hydrocarbon on a weekly basis by collecting samples and having them tested. [District Rule 4311, 6.6.5] Federally Enforceable Through Title V Permit
139. The operator shall provide the APCO with access to the flare monitoring system to collect the vent gas samples. [District Rule 4311, 6.6.7] Federally Enforceable Through Title V Permit

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140. The operator shall monitor the volumetric flows of the flare's purge and pilot gases with flow measuring devices or other parameters as specified on the Permit to Operate so that volumetric flows of pilot and purge gas may be calculated based on pilot design and the parameters monitored. [District Rule 4311, 6.7] Federally Enforceable Through Title V Permit
141. The operator shall monitor and record the water level and pressure of the water seal that services the flare daily. [District Rule 4311, 6.8] Federally Enforceable Through Title V Permit
142. The operator shall report periods of flare monitoring system inoperation greater than 24 continuous hours by the following working day, followed by notification of resumption of monitoring. Periods of inoperation of monitoring equipment shall not exceed 14 days per any 18-consecutive-month period. Periods of flare monitoring system inoperation do not include the periods when the system feeding the flare is not operating. [District Rule 4311, 6.9.1] Federally Enforceable Through Title V Permit
143. The operator shall install and maintain equipment that records a real-time digital image of the flare and flame at a frame rate of no less than one frame per minute. The recorded image of the flare shall be of sufficient size, contrast, and resolution to be readily apparent in the overall image or frame. The image shall include an embedded date and time stamp. The equipment shall archive the images for each 24-hour period. In lieu of video monitoring the operator may use an alternative monitoring method that provides data to verify date, time, vent gas flow, and duration of flaring events. [District Rule 4311, 6.10] Federally Enforceable Through Title V Permit